Amendments to the Specification:

Please insert at the beginning of the document:

Cross-Reference to Related Applications

[0000a] This application is the U.S. national stage application of International Application PCT/US03/10346, filed April 3, 2003, which international application was published on October 16, 2003, as International Publication WO03085801 in the English language. The International Application claims the benefit of U.S. Provisional Application No. 60/370,484, filed April 3, 2002. The above-mentioned patent applications are assigned to the assignee of the present application and are herein incorporated in their entirety by reference.

Please amend paragraph [0002] as follows:

[0002] Previously disclosed, in ~~application Ser. No. 09/255,291 and in~~ U.S. Patent[[.]] Nos. 6,570,361 and 6,351,095, have been High Phase Order electrical rotating machine designs. Of specific interest is the application "HIGH PHASE ORDER MOTOR WITH MESH CONNECTED WINDINGS," Ser. No. 09/713,654, filed Nov. 15, 2000, now US Patent No. 6,657,334, which discloses the use of a high phase order concentrated winding machine, connected to an inverter using a mesh connection. When using a mesh connection, the voltage across each winding is a function related to the voltages of both of the two inverter legs that drive that winding, and therefore, may be different from the actual voltages produced by the inverter legs. That machine is deliberately operated either with a fundamental drive waveform, a pure harmonic drive waveform, or admixtures of these, in order to change the volts/hertz ratio of an induction machine, in order to increase the power delivered to the machine by a power electronics drive system when the motor was being operated at low speed and thus reduced slot voltage. In other words, the motor can be operated at higher current than the currents produced in the inverter

Please amend paragraph [0007] as follows:

[0007] FIG. 1a (prior art) uses arrows to show the flux distribution in a stator incorporating distributed windings, and FIG. 1b uses arrows to show the magnetic field strength in a stator

incorporating concentrated windings. A concentrated winding generates a field distribution that is squared. Physically, the field Hθ~~(theta)~~ is evenly distributed as shown in FIG. 1b. In a distributed winding, the turns of the winding are distributed so that the resultant field distribution is sinusoidal in θ~~theta~~, as depicted in FIG. 1a.

Please amend paragraph [0008] as follows:

[0008] FIG. 1c shows the graph of a r=Hθ~~(theta)~~+baseline offset, the sinusoid which the distribution of the windings approximates as much as possible. The ideal approach is to distribute the turns according to the formula [[(]]dN[[)]]/[[(]]dθ~~theta~~[[)]]=(N/2)sinθ~~theta~~. That is, the turn density in number of turns per radian must be approximately (N/2)sinθ~~theta~~. The highest turn density will be at [[+-pi]] ± π /2. The result of the sinusoidal distribution is to cancel, to a very large degree, all spatial harmonics.

Please amend paragraph [0013] as follows:

[0013] Temporal harmonics with a higher harmonic number than the number of phases will not be properly represented on the stator, and will produce magnetic fields with a number of poles different from double their phase number. For example, in a 17 phase 2-pole machine, the 19th harmonic would produce a 30-pole rotating field (15th harmonic of 2 pole) and in a 7 phase, 4 pole machine, the 9th harmonic would produce a 20 pole rotating field (5th harmonic of 4 pole). In a 7 phase 2-pole machine, the 13th harmonic would be a 2-pole rotating field. In the cases when the harmonic order exceeds the number of phases, the rotating field produced by this harmonic will not be properly represented. Instead a rotating field that is a non-corresponding harmonic of the fundamental rotating field will be produced. This field may rotate at a different direction from the fundamental and possibly in the reverse direction This is similar to temporal harmonics with a harmonic number greater than three in a three phase machine, in the fact that they represent detrimental torque. However, all the magnetic fields produced by these harmonics in the instances when the pole count is greater than the pole count of the fundamental, would be spatial harmonics of the fundamental, such as the 19th harmonic in the 17 phase, 2 pole machine,

which produces a 30 pole rotating field, and the 9^{th} harmonic in the 7 phase, 4 pole machine, which produces a 20 pole rotating field.

Please amend paragraph [0016] as follows:

[0016] A bandwidth-limited continuous signal may be completely represented by a discrete series of samples, providing that this series of samples occurs frequently enough. The continuous signal may have an amplitude which changes over time, in which case the samples form a time series of measured amplitude versus integral time (e.g. 1 sample each second). The continuous signal may be an amplitude which changes with position, in which case the samples for a series of measured amplitude versus integral position, (e.g. 1 sample each meter). The period is arbitrary, and depends upon the signal being sampled. For baseband signals, the sampling frequency must be twice the maximum frequency present in the signal being sampled, otherwise aliasing may occur. Aliasing is when the signal being sampled contains frequency components that are outside of the allowed frequency range, in which case the results of sampling and reconstruction will be incorrectly produced, but allowed components.

Please amend paragraph [0081] as follows:

[0081] In a further embodiment, the mesh connection is specifically designed to make the best use of the low order harmonics that are able to flow in the electrical rotating machine. This is described in great detail in my U.S. [[p]]Patent ~~application Ser.~~ No. 6,657,334~~09/713,654~~. Usually, the third harmonic is able to produce the greatest variability between currents and voltages across windings.